

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent; or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English.

2. Claims 1-10, 14-18, 21-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Eneboe et al, US Patent # 6744772.

With regard to claim 9 and 24, Eneboe discloses the system and method for transmitting a digital content stream comprising:

A transmission device providing an asynchronous signal (column 2, Lines 8-11 – Eneboe describes here an asynchronous receiver which receives asynchronous packets and transmits them through a switched node network) containing a digital content stream (asynchronous data inherently pertains to digital data) having a plurality of reference markers at a known time interval (column 6, lines 9-12 – Eneboe describes an embodiment in which the timing information of the asynchronous packets is stored in the packet headers to be processed by a scheduler) and

a conversion device (column 2, lines 16-19) coupled to receive the asynchronous signal from the transmission device (column 2, lines 8-11); the conversion device configured to identify two or more reference markers in the digital content stream (column 6, lines 9-12 – Eneboe teaches the timing information from each packet is stored by the scheduler) determine a first clock rate from the known time interval between the two or more reference markers and the amount of digital content received between the two or more reference markers (column 6, lines 12-24, Fig. 4 – Eneboe discloses a routing algorithm that determines the clock rate and timing information for each packet for transmission through the network, based on the timing information, or “reference markers” stored in the data packets) and generate an isochronous digital content stream by spacing the digital content at an interval corresponding to the first clock rate (as stated above, Eneboe generates an isochronous signal and routes it based on the timing algorithm)

With regard to claim 10, Eneboe discloses:

a spacing control device configured to operate as a state machine and determine the time interval between a plurality of digital content stream segments in the isochronous digital content stream (column 6, lines 8-12 – Eneboe describes an embodiment in which the scheduler reads the timing information in the data packet headers)

a first-in first-out stack to receive a plurality of segments of the asynchronous video stream (column 5, lines 57-59 Fig. 3A item 34B— Eneboe stacks data packets in FIFO buffers during processing) and
an output device to retrieve the segments of the asynchronous video stream in a first in first-out basis (Fig. 3B and column 5, lines 57-62) and transmit them at substantially equal time intervals in the isochronous digital video stream, the substantially equal time intervals corresponding to the first clock rate (Fig. 3B and column 6, line 6-9 – Eneboe teaches the scheduler transmits the packets based on the timing information stored in the header of the packet)

Claim 14 is the system of claim 9 with the feature of the conversion occurring in real-time. This claim has been analyzed and rejected. Eneboe's system converts the data substantially in real-time based on the target and arrival times of the data packets (column 3, lines 30-33).

Claim 15, 16, and 17 are the system of claim 9 with the feature of calculating the clock at either a predetermined number of reference markers, at every instance of a reference marker, or based on the original clock rate of the digital stream. These claims have been analyzed and rejected. As stated above in the claim 9 and 24 rejection, Eneboe discloses a scheduler that determines the transmission intervals based on the timing information in the packet header. Eneboe discloses that the scheduler will calculate the clock rate and schedule transmission based on the predetermined target and arrival times data (column 3, lines 30-33). This timing is based on the original clock rate of the data stream.

Claims 1-8 pertain to the signal conversion system portion of the digital content transmitting system of claims 9-17, and have been analyzed and rejected as disclosed by Eneboe.

Claims 18, 21, 22, and 23 are the method of claims 1, 4, 6, and 8, and have been analyzed and rejected.

Claims 24-27 are the method of the system claims 9, 14, 15, and 17, and have been analyzed and rejected.

Claim 28 combines the features of claims 1 and 2, and has been analyzed and rejected. The applicant does specify a "clock detector" in the device of claim 28. In the specification, the applicant refers to clock reference markers as "timing information". This claim is not distinct from claims 1 and 2.

Claim 29 is the system of claim 28, with the addition of the feature claim 8, and has been analyzed and rejected as being anticipated by Eneboe.

Claims 30-33 pertain to the machine-readable medium containing the instructions to accomplish the method of the configuration of Claim 1, 4, 6, and 8, and have been analyzed and rejected.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

7. Claims 11-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Eneboe et al, US Patent # 6744772" in view of "Haddard et al, US PG Pub # 20030043924".

With regard to claim 11, Eneboe teaches the system of claim 9 (see claim 9 rejection), but fails to teach that the digital content stream is an MPEG-2 data stream.

Haddard, in his application discloses an apparatus to synchronize digital video and audio MPEG streams in a video playback device. To do this, the system uses an MPEG decoder to decompress the incoming content stream (paragraph 0040). A person of ordinary skill in the art at the time of the invention would have found it obvious to add the MPEG decoder that Haddard discloses with the asynchronous system that Eneboe discloses. MPEG-2 digital data is an example of asynchronous data. The advantage of combining these two teachings would be to take advantage of the broadly accepted and widely used MPEG video compression standard.

Claims 12 and 13 specify the data as a "digital video content stream" and a "digital audio content stream". These claims are rejected based on the claim 11

rejection. Digital video and digital audio are examples of MPEG data, as described in paragraph 0042 and 0043 of Haddard's disclosure.

Claims 19-20 are the method of to of system claims 12-13 and are rejected on this basis.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark D. Featherstone whose telephone number is (571) 270-3750. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F US Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 4157

e-signed

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